12. (Amended) A burner as claimed in Claim 1, further comprising flow guidance means for redirecting at least part of the flow in one channel into an adjoining channel that communicates with the one channel via the communicating openings, the flow guidance means being associated with at least one of the communicating openings.

16. (Amended) A burner as claimed in Claim 12, wherein a zone of the catalyzer structure containing the inlet end is equipped with turbulators and is constructed catalytically inactive or inert;

at least one catalytically active zone is constructed in an area between the inlet end and the outlet end of the catalyzer structure; and

a zone of the catalyzer structure containing the outlet end is equipped with turbulators and is constructed catalytically inactive or inert.

17. (Amended) A burner as claimed in Claim 12, wherein a zone of the catalyzer structure containing the inlet end is equipped with turbulators and is constructed catalytically highly active;

a turbulators-free zone is constructed catalytically active in an area between the inlet end and the outlet end of the catalyzer structure; and

a zone of the catalyzer structure containing the outlet end is equipped with turbulators.

18. (Amended) A burner as claimed in Claim 1, wherein the carrier material comprises at least several layers, each layer being formed of a material web that has been at least one of folded and corrugated in zigzag or triangular or rectangular shape, the apex lines or apex surfaces of the folds, the waves, or both, in material webs that adjoin each other transversely to the flow direction are oriented differently, such that adjoining material webs rest against each other at the intersecting apex lines or apex surfaces and form channels between them.

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20. (Amended) A burner as claimed in Claim 1, wherein the carrier material comprises a material web folded several times, wherein the apex lines or apex surfaces of the folds extend approximately in the longitudinal direction of the catalyzer structure, wherein planar wall sections are formed between consecutive apex lines or apex surfaces, wherein adjoining planar wall sections extend parallel to each other, and wherein the channels are formed between the adjoining wall sections.

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24. (Amended) A process of using a catalyzer structure, comprising the steps of:

providing a catalyzer structure including a heat-resistant carrier material that forms the walls of several adjoining channels that pervade the catalyzer structure in the longitudinal direction of the catalyzer structure and enable that a gaseous reaction mixture flows through the catalyzer structure, wherein the walls are coated at least in part with a catalyst and wherein between an inlet end and an outlet end of the catalyzer structure communicating openings are constructed in the walls, through which the adjoining channels are communicating with each other, in a catalytically operating burner; and

flowing a gaseous reaction mixture through the catalyzer structure.